

Edema and congestion of the lungs is a very serious complication, and requires rest, wet cups to the chest, opiates to relieve the pain, and hot mustard foot-baths to draw as much blood as is possible from the engorged lungs. The possibility of sudden death in this condition must be kept in mind.

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## THE COUNTING OF SPONGES IN ABDOMINAL SURGERY

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AMONG the many essential things for an abdominal operation is an absolutely correct sponge-count. While the surgeon is directly responsible to patient and friends for the successful carrying out of the work he has undertaken, it is nevertheless true that many of the details are performed by trained assistants, either doctors or nurses, and by common consent the sponge-count has become a part of the nurse's duties in the operating-room.

It is a matter for regret that we have to acknowledge that mistakes have been made resulting in the loss of life, but it is true, and so long as "to err is human" the possibility of such mistakes will exist. To guard against them, some surgeons suggest having specially trained surgical nurses; others have devised wire racks and different mechanical devices for putting the soiled sponges on for accurate counting during the operation; while still other methods are practised in different hospitals. But care during the operation (no matter how great) is not sufficient. It must be exercised *from the very beginning of the sponge-making* and kept up systematically to the end, so that if what seemed impossible would happen and a mistake occur, it would be detected at once and the responsibility fixed upon the person who made it.

The system in use at Harper Hospital, Detroit, Mich., probably has some features peculiar to itself, and, as it has been tried and proved correct for several years, it may not be amiss to mention the principles that underlie it, as well as its mechanical details.

When the nurse enters the operating-room for the training there she is, from the day she enters until she leaves, constantly impressed not only with the importance of all the work peculiar to that department, but especially with the following points:

1. That a mistake in the sponge-count is just as serious as would be the administering of a wrong dose of the most deadly drug.

2. That she is given a system so accurate, that if followed no mistake is possible.

3. That every bit of sponge-work she does she will be held personally responsible for.

4. That any error made by her will most certainly be traced back to her, and that she will be held accountable to the surgeon for it, *no matter where she may be at the time.*

This system has commended itself to both surgeons and nurses, as much for its simplicity as for its accuracy. It is elastic enough to satisfy the most extravagant surgeon; it is so simple that "a wayfaring man, though a fool, need not err therein." The nurse undertakes it without fear, and the surgeon knows that his needs will be satisfied, while if he is a particularly nervous man, he can verify the count at any moment, with almost no loss of time.

The following points have been observed in the selection of this system:

1. The number selected for use was the square of five—namely, "25,"—and *no other number* is allowed to be made up for any purpose whatever.

2. The sponge is *always* made with *one* selvedge and half the width of the gauze, and thus it is distinguished from any other piece of gauze used in the operating-room.

3. Each twenty-five sponges is done up in a separate package labelled "25 sterilized sponges," *signed by the name in full* of the nurse who made them, dated, and immediately placed in the sterilizing-bag and left there until after the third consecutive sterilization, when it is removed to the supply-room, ready for the final sterilization just before the operation. The label is written in ink and securely fastened on each package.

4. The sponges are uniform in size, a measure being used to cut them by, size seven and one-half by eighteen inches. To make them the gauze is folded with the selvedge together, then folded again, and once again. It is then laid flat on the table and *never moved* until five sponge-lengths have been cut off. This is the *first* count. As these five lengths are picked up and laid one on top of the other, they are again counted, making the *second* count. Again the gauze is folded, the same as before, and *five* more cut and *counted the same as the first group*. The second group is laid *across* (thus  $\begin{array}{c} \text{second group} \\ + \\ \text{first group} \end{array}$ ) the first one, not straight on top of it. Treat each succeeding group this way until you have *five* groups, each containing five sponge-lengths, and each group lying *across* the preceding one. Next count these groups as they stand in the pile, making the *third* count.

Place a towel to the right and another to the left on the table, and draw the pile towards you without disturbing the groups. Open each piece and cut in *two*, placing one to the right and one to the left, repeating until all have been cut. Roll up the one towel carefully until the sponges in the other have been made. As each sponge is made, lay it on the towel, one against the other, until there are *five* in a row, then begin the next row, treating in the same manner as the first, and repeat until you have *five* rows, each containing five sponges, making the square "25." This completes the *fourth* and *fifth* counts. Then before doing up the sponges in the pocket-form package they are again counted *individually* one way of the square, and in *groups* of  $\frac{+}{+}$ <sup>three</sup><sub>two</sub> the other, making the *sixth* and *seventh* counts.

When the operator is ready to begin, the sponge-slate is marked plainly with chalk, "25," and the nurse who holds the sponge-tray is given a package, with the label *securely pinned on*, though it is open (a precaution taken so as to be able to identify the responsible person should a mistake be discovered). The sponges are drawn forward in *groups of five* with sterile forceps. The sterile sponges are handled only by the surgeon and his first assistant. The soiled ones are received in a small tray and transferred immediately to a large one, where they are placed in rows, *each containing five*, until there are *five* such rows. They are then counted both ways of the square and removed. In the mean time, another package has been given to the nurse and "25" recorded on the slate for it when it is given, but the *first "25" is not checked off until the actual twenty-five soiled sponges have been counted twice* and thus are ready to be removed. Each succeeding package is handled in the same way, the record being made when the sponges are handed to the nurse, the previous record being checked off only when the twenty-five soiled sponges are in the possession of the assistant nurse. The slate is in plain sight, likewise the tray of soiled sponges, so that at a glance the surgeon can verify the nurses' counts if he wishes so to do.

Several practical points are claimed for this system: (1) It is simple; (2) it is accurate; (3) it fits every nurse to take charge of a sponge-count—not a few specially trained ones; (4) it is as practical in private houses as in hospitals; (5) it is always ready; (6) it has stood the test of years of use, inspiring both surgeons and nurses with confidence in its efficiency; (7) the many counts are performed while the actual work is going on, so that there is no time lost even in so important a detail.

